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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/147,813	08/31/99	BRAVET	J 124707960VPC

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EXAMINER

PAULRAJ, C

ART UNIT

PAPER NUMBER

1773

DATE MAILED:

03/16/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	Application No. 09/147,813	Applicant(s) BRAVET ET AL.	
	Examiner Christopher G Paulraj	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 18-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some \* c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) \_\_\_\_.
3. ☒ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

#### Attachment(s)

- 14) ☒ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 17) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 32 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claim refers to "aid constituent elements". However, neither the claims nor the specification provide a definition as to what constitutes an "aid constituent element".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 refers to a product which has an optical quality to that of a window. While the specification makes reference to the R 43 standard for motor vehicle windows in use in France, an English translation of this document or a US equivalent needs to be supplied. Claim 18 also refers to a structure of a plastic core with a skin.

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However, the claims and the specification only make reference to one skin layer. By virtue of its definition, the term core refers to a product that is completely surrounded by a skin layer. It is not clear whether or not the product requires a plastic core layer in which a skin layer is bonded to both sides.

Claim 19 refers to further structural elements of the product. However, it is not clear exactly where the "at least one functional layer" is positioned by the language "between which is interposed".

Claim 22 refers to the grafting of the hydrophobic/oleophobic agent. However, it is not made clear by the claims and the specification as to where exactly the grafting occurs. Furthermore, it is not clear whether or not the support film of poly(vinyl fluoride) or poly(vinylidene fluoride) remains attached to the outer surface and becomes part of the final product.

Claim 23 refer to fluorinated polysilanes. However, it is not clear whether, by the use of the term polysilane, applicant is referring to a mixture of different types of silanes or a polymerized silane. In the latter case, the proper term should be a fluorinated polysiloxane

Claim 28 refers to the "required mechanical properties". However, it is not made clear by the claims nor the specification what these properties exactly are.

Claim 29 refers to the "regulation optical properties". Once again, it is not clear by the claims nor the specification what these properties exactly are.

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A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 35 recites the broad recitation "temperature between 100 and 300°C", and the claim also recites "more precisely between "140 and 240°C" which is the narrower statement of the range/limitation.

In claim 31, the process step a) requires assembling the constituent elements. However, it is not clear exactly what these constituent elements are. It is also not clear by what is meant by "supplying them from a device of developable shape". It is not clear exactly how the constituent elements are to be subjected to consolidation. Process step b) requires that the certain constituent elements be crosslinked. However, it is not clear exactly what elements are being crosslinked. The process also describes

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the formation of only one skin layer onto the plastic core. Since a "core" material would require that another skin layer be attached, this claim is considered indefinite.

Regarding claim 38, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 18-21, 25, 29-30, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Motter et al. (U.S. patent number 4,112,171).

Motter et al. discloses a transparent structure in which an all plastic substrate (col. 1, lines 38) is bonded to another plastic film onto which is coated a layer of abrasion resistant organopolysiloxane (col. 4, lines 31). The plastic film on which the polysiloxane is coated is polyethylene terephthalate (col. 4, line 27). Under this layer of PET is a layer of polyvinyl butyral which serves as an adhesive layer to the core material (col. 4, line 24). The thickness of the skin layer is less than or equal to 500  $\mu\text{m}$  (col. 4-col. 5) and the thickness of the scratch resistant layer is about 4  $\mu\text{m}$  (col. 4, line

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29). The product is designed to be used in automotive glazings (col. 1, lines 21-22). Therefore the product would inherently have the regulation optical properties and no visible crazing.

Claims 18-21, and 24-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Oliver et al. (U.S. patent number 4,634,637).

Oliver et al. discloses a transparent product which is coated with a scratch resistant layer. A sheet of PET may serve as the plastic core material. The outermost scratch resistant layer is an organopolysiloxane, which is coated at a thickness between 1 and 10  $\mu\text{m}$ , onto another layer of PET. The layers are bonded together using an adhesive. Interspersed between these layers are layers of optically selective metal layers with a thickness between 2 and 35 nm separated by dielectric layers (col. 6-col. 7).

Claims 18-21, 31 and 33-38 rejected under 35 U.S.C. 102(b) as being anticipated by Tatebayashi (U.S. Patent number 4,368,042).

Tatebayashi discloses a process of making a transparent product with a plastic core and scratch resistant skin layer. The process involves the steps of depositing a hard-coating agent onto a polycarbonate film. The film is then subjected to heat treatment at 130°C and then shaped inside the cavity surface of a mold. Then a polycarbonate resin is injected molded into this mold to form the plastic core material of the transparent product. (col.6 - col.7).

***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-23, 31, and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tatebayashi in view of Bier et al. (U.S. Patent number 5,849,414).

Tatebayashi et al. does not disclose the presence of hydrophobic agents such as fluorinated polysilanes in the scratch resistant layer of his composite. Bier et al., however, discloses that fluorinated silanes may be mixed in with a scratch resistant coating to be applied onto a polycarbonate substrate.

Tatebayashi and Bier et al. are considered analogous art since they both deal with similar fields of endeavor, that is the coating of transparent articles. It would therefore have been obvious to one of ordinary skill in the art to add fluorinated silanes to the hard-coat layer of Tatebayashi. The motivation for doing so would be to impart hydrophobic surface properties to the final product.

### ***Conclusion***

Request for consideration of Documents cited in the International search report have been noted. However, these documents have not been considered due to their lack of conformance. Documents to be considered should be listed on PTO-1449 or an equivalent form.




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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Paulraj whose telephone number is (703) 308-1036. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul. J. Thibideau can be reached on (703) 305-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 or 305-3601.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.

  
D. S. NAKARANI  
PRIMARY EXAMINER

cgp  
March 2, 2000